

Application No. 09/913,448  
Filed: 8/14/01  
Group Art Unit: 1774

(e) an inclusion complex of said cyclodextrin derivatives.

19. The fiber of claim 8, wherein [CD] is selected from the group consisting of

(a) a hydroxypropyl, methyl or acetyl derivative of  $\alpha$ -cyclodextrin,

(b) a hydroxypropyl, methyl or acetyl derivative of  $\beta$ -cyclodextrin,

(c) a hydroxypropyl, methyl or acetyl derivative of  $\gamma$ -cyclodextrin,

(d) an inclusion complex of said cyclodextrins and

(e) an inclusion complex of said cyclodextrin derivatives.

20. The fiber of claim 9 wherein said poly(carboxylic) acid is selected from the group consisting of Y\*.

REMARKS

1. This is in response to the Office Action mailed 10/2/02.  
Claims 4-20 remain pending in this application.

2. Applicant requests reconsideration of the rejections under 35 USC 112, second paragraph.

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a. Applicant has cancelled claims 1-3 and replaced them with new claims 11-17, which more clearly define the invention. Applicant has also deleted preferred formulations from claims and incorporated them in new claims 18-20.

b. Applicant has indicated in the application (see page 3, lines 34-37; page 4, lines 21-34) that the invention applies to treating both fibers or materials made from fibers in order to achieve the desired benefit. It is further explained on page 5, line 33 - page 6, line 6 (with variations in the process described further), that the process involves reaction with the fiber itself, whether or not the fiber is woven into a fiber-based material. Thus Applicant believes that there is only one invention described in this application, and Applicant has amended the claims accordingly.

c. Applicant has defined the preferred drying temperature in claim 7 as 90C to 110C. On page 8, line 1 of the application (and original claim 3 therein), the preferred temperature is described as "preferably 110C or substantially 110C", while Examples 1-11 utilized drying temperatures of 90C. Applicant believes that 90C to 110C represents the preferred English translation of this concept.

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3. Applicant has filed a new IDS, which includes copies of all the references cited. The only English portions of the Denter article and DE 195 20 967 are the abstracts enclosed.

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

WELTROWSKI ET AL

By:

  
Charles L. Gagnebin III  
Registration No. 25,467  
Attorney for Applicant(s)

WEINGARTEN, SCHURGIN,  
GAGNEBIN & LEBOVICI LLP  
Ten Post Office Square  
Boston, MA 02109  
Telephone: (617) 542-2290  
Telecopier: (617) 451-0313

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Enclosure

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WEINGARTEN, SCHURGIN,  
GAGNEBIN & LEBOVICI LLP  
TEL. (617) 542-2290  
FAX. (617) 451-0313

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MARKED-UP VERSION OF CLAIM AMENDMENTS

4. A process according to claim ~~11~~, wherein the poly(carboxylic) acid and poly(carboxylic) acid anhydride are selected from the group consisting of following poly(carboxylic) acids and poly(carboxylic) acid anhydrides saturated and unsaturated acyclic poly(carboxylic) acids, saturated and unsaturated cyclic poly(carboxylic) acids, aromatic poly(carboxylic) acids, hydroxy poly(carboxylic) acids, citric acid, poly(acrylic) acid, poly(methacrylic) acid, 1,2,3,4-butanetetracarboxylic acid, maleic acid, citraconic acid, itaconic acid, 1,2,3-propane-tricarboxylic acid, aconitic acid, all-cis-1,2,3,4-cyclopentanetetracarboxylic acid, mellitic acid, oxydisuccinic acid, and thioldisuccinic acid.

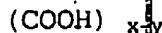
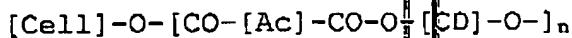
5. A process according to claim ~~11~~, wherein the catalyst is selected from the group consisting of dihydrogen phosphates, hydrogen phosphates, phosphates, hypophosphites, alkali metal phosphites, alkali metal salts of polyphosphoric acids, carbonates, bicarbonates, acetates, borates, alkali metal hydroxides, aliphatic amines and ammonia, preferably selected from sodium hydrogen phosphate, sodium dihydrogen phosphate and sodium hypophosphate.

6. A process according to claim ~~11~~, wherein the cyclodextrin is selected from the group consisting of  $\alpha$ -cyclodextrin,  $\beta$ -

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cyclodextrin and  $\gamma$ -cyclodextrin and wherein the cyclodextrin derivatives are selected from hydroxypropyl, methyl or acetyl derivatives of  $\alpha$ -cyclodextrin,  $\beta$ -cyclodextrin and  $\gamma$ -cyclodextrin and inclusion complexes formed from said cyclodextrins or said cyclodextrin derivatives.

7. A fiber having (a) hydroxide or (b) amine or (c) both hydroxide and amine functional groups, on fiber-based material, wherein the fiber or fibers of the fiber-based material is selected from fibers comprising a hydroxyl function and/or an amine function, the fiber or the fibers of said fiber-based material being bonded, via a covalent bond of an ester or amide typebond, to at least one molecule of cyclodextrin and/or cyclodextrin derivative and/or to an inclusion complex of cyclodextrin or cyclodextrin derivatives or to a linear and/or branched and/or cross linked compound of cyclodextrin(s) and/or cyclodextrin derivatives(s) and/or to inclusion complexes of cyclodextrin or cyclodextrin derivatives and wherein the to form a structure comprising the repetition of a unit with general formula:



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or

[Ker]-NH-[CO-[Ac]-CO-O-[CD]-O-]<sub>n</sub>

|  
(COOH)<sub>x-y</sub>

where  $2 \leq y < x-2$ ;  $x \geq 3$  and

$n$  is 1 or more, and in which:

[Cell] represents the macromolecular chain of a natural or artificial cellulose fiber;

[Ker] represents the macromolecular chain of a natural or artificial protein fiber;

[COOH]<sub>x-y</sub>

|  
[Ac]

represents the molecular chain of a poly(carboxylic) acid

[COOH]<sub>x-y</sub>

|  
[Ac]

where at least two carboxylic acid functions (COOH), have undergone esterification or esterification and amidation respectively and which carries at least one carboxylic acid

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function (COOH)<sub>x-y</sub> that has not undergone an esterification or amidation reaction; and

[CD] represents the molecular structure of  $\alpha$ -cyclodextrin,  $\beta$ -cyclodextrin or  $\gamma$ -cyclodextrin derivative, preferably a hydroxypropyl, methyl or acetyl  $\alpha$ -cyclodextrin,  $\beta$ -cyclodextrin or  $\gamma$ -cyclodextrin derivative or an inclusion complex of said cyclodextrins or said cyclodextrin derivatives.